

PROVINCE OF BRITISH COLUMBIA.

DEPARTMENT OF AGRICULTURE (HORTICULTURAL BRANCH).

CULTURE OF SMALL FRUITS FOR THE INTERIOR DISTRICTS OF BRITISH COLUMBIA.

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SMALL-FRUIT growing in the Interior valleys of British Columbia has been demonstrated to be one of the most profitable adjuncts to the orchard. In nearly all sections of the Province, and especially in the Interior districts, small fruits of all kinds do remarkably well. The character of the soil, the ideal climatic conditions, the proximity to a good growing market, transportation, and the establishment of several local canneries and jam-factories are having a marked influence in encouraging more extensive planting. The large crops of berries of the highest quality in colour, flavour, and shipping qualities have been the means of creating much favourable comment from those capable of judging the merits of our products.

The prices paid by the canning and jam factories in the various districts for local goods, as well as the prices realized for fresh shipped small fruits, are encouraging further planting. The one feature which has retarded more extensive planting in nearly all sections is the scarcity of labour. In some parts the Indians and Doukhobors have solved this problem; in others the children from the towns and cities.

Those who have not a sure labour-supply should plant in a small way. Those who are making the greatest success of small-fruit growing are those who plant in areas small enough to handle well, with the help of their own or their neighbours' families at picking-time. With a well-organized shipping association in each district where each grower co-operates in shipping a fair amount of good berries, great success and profits can be realized. This is especially true during the early years of orcharding, the larger fruits having not yet commenced to bear in paying quantities. Many a grower has been able to keep his family comfortably and also to maintain the running expenses of the orchard by growing small fruits. There is possibly no branch of fruit-growing which repays better for good attention than the culture of small fruits; for this reason, yields and profits vary greatly. It will be the aim of the writer of this circular to give as closely as possible the methods employed by growers showing the greatest success.

STRAWBERRIES.

The strawberry is more largely grown than any other of the small fruits. This is possibly due to its demand and adaptability to intercropping conditions in the orchard. An average crop of strawberries is about 250 crates per acre,

although certain growers have reached 600 crates in good seasons. It costs from \$115 to \$125 to plant out and care for an acre of strawberries, depending on local conditions; about 60 cents to pick and pack a 24-lb. crate, making a total cost per crate of \$1.20 with an average crop.

In the selection of a site for strawberries, there are very few really poor ones, with the exception of the very light sandy soils or those situated so low that the rise and fall of the water affects the plants. Strawberries do best on any good, heavy, silty to clay loam soil, having a good quantity of vegetable matter or humus incorporated in it. The soil must be *well drained*, either naturally or artificially. For the above reason growers formerly considered a sandy, open soil the best, but experience has demonstrated that, if well drained, heavier lands will yield the best and heaviest crops. The proper preparation of the land before setting the plants is important. Newly cleared timber lands should be worked for a year or two and the soil enriched by ploughing under a green crop, preferably leguminous, or by applying barnyard manure before planting. Poultry manure is one of the best fertilizers for strawberries. The ground should be well levelled before the plants are set, holes and hollows filled in by means of a scraper or split-log-drag leveller. If strawberry-plants are set in uneven land, the growth will be uneven, due to the plants in the hollows being killed or affected materially by standing water or the heaving by frost.

Spring planting is best; take the plants from runners in the bearing patch, selecting the first two plants on the runners from the old plant. These will be stronger and do better than the third, fourth, or younger plants. Where large numbers of plants are required the planting of a special propagating-bed is practised. The parent plants are allowed to set all the runners and new plants they will, and in the spring the whole bed is dug up and the strongest plants selected. There is still a great scope for improvement by selecting and marking the most prolific and healthy plants in the patch, and then propagating from them. One man claims to have increased his yield from 8,000 to 15,000 lb. per acre by the selection of the most promising plants in his patch from which to raise his new stock.

The system usually used for planting is known as the "matted row." The plants in this system are set 18 to 24 inches in the row and the rows $3\frac{1}{2}$ to 4 feet apart, depending on location and the growth of the variety being planted. On new, weedy, or poor soil the "hill system" will give the best results. In this system the plants are set 18 by 36 inches and are not allowed to make any runners. The runners are kept off by the use of a sharp hoe or a circular dropper. With the hill system the plants will suffer less in case of a dry spell, and in the non-irrigated districts it is usually followed.

In planting strawberries on either plan, plant them in straight parallel rows, to facilitate easy horse-cultivation. Every grower should endeavour to do as much work as possible by horse-cultivation; there will still be plenty of hand-work. Several methods are employed in setting out plants; some use a spade, others a V-shaped dibber; the main point in setting is to pack the soil firmly around the plants just up to the crowns. The plants will start better if their roots and larger leaves are pruned off a bit and the soil moist.

The subsequent cultivation of the patch will be to keep the ground clean and cover with a good soil-mulch during the summer; the object being to develop good strong crowns the first year, and the second year take off a crop. In most sections and where the soil is clean, two crops are harvested before the patch is ploughed up. It is not advisable to take more than two crops from a patch unless heavy fertilizing of the soil is practised, as strawberries

are heavy surface feeders. In the spring of the year the ground should be well worked up with a horse-cultivator and hand-hoe, and continued until the fruit begins to set, when cultivation should be stopped until crop is harvested.

The plants should be mulched with some material to keep the berries clean; winter mulching should be practised where the snowfall is light or the ground apt to be bare for some time during freezing weather.

The varieties to plant must be determined by experimenting in each section, or, even better, on each farm. The principal sorts grown are the Magoon, Royal Sovereign, Parson's Beauty, and Clark's Seedling for shipping, and Glen Mary, New York, Wm. Belt, and Senator Dunlop for the local market or jam-factories.

RASPBERRIES.

The next most important small fruit is the raspberry. It is an easily handled crop and very profitable where conditions are favourable. They follow the strawberry in ripening and the same pickers can be kept busy. The plants, if well fertilized, should bear profitably for five to ten years, or even much longer with good care. Raspberries are heavy, shallow feeders and require plenty of moisture at fruiting-time. For this reason they should be planted only on rich, well-drained soil where the moisture-supply is naturally plentiful or where irrigation can be applied when needed. The same thorough soil-preparation is essential for raspberries as mentioned for strawberries. Good, strong young plants are selected from between the rows in the bearing patch, and set out in the spring in straight rows 6 to 8 feet apart, depending on the variety, and the plants set 2 feet apart in the rows. Prune the young plants well back at planting-time to encourage new suckers to grow for the following year.

After the first year the plants are supported by running a wire on each side of the row. All two-year-old canes or fruited wood must be removed each year and the stronger of the new canes left to bear the following year. The pruning is usually done in the fall, as the canes will stand the weight of snow better if shortened. The canes are thinned out to about five to each hill, or 6 inches apart in a running row. The prunings are removed or are chopped up with a disk in the rows, and the patch well cultivated with a seven-tooth horse-cultivator until the fruit begins to form and the rows become too close.

No further cultivating is, as a rule, required during the season. Plants may be allowed to grow in the rows for further planting or for sale, but judgment should be used as to the number, not to affect the bearing canes and those young ones for the following year. All small, unrequired new plants or suckers should be cut out with the hoe while going over the patch in the spring and summer. The varieties principally grown are: Red—Cuthbert and Herbert, Black—Gregg and Cumberland, Purple—Columbia.

BLACKBERRIES.

Blackberries are not very extensively grown, but in good locations they are a very profitable crop. Their season is a little later than that of the raspberry; the same cultural methods are used. The varieties principally grown are Snyder, Erie, and Evergreen.

Loganberries are very heavy producers and are being grown with good success in some sections. The canes are not very hardy, and in the colder sections winter protection is necessary; they are usually laid down and covered with brush, coarse hay, or straw.

GOOSEBERRIES.

The planting of gooseberries has increased extensively of late in the Interior, due to the almost unlimited demand at the jam and canning factories. The gooseberry is very easily grown and handled, picking probably being the greatest task. This can be done with gloved hands, and the leaves removed later by hand or by putting the berries through a fanning-mill.

The next few years will show increased planting of this fruit. There are two classes of gooseberries—the English varieties, such as Crown Bob, Industry, Whitesmith, Lancashire Lad, and the American sorts, as the Downing, Pearl, Oregon Champion, Josselyn, etc. The English varieties have much larger berries and do not require so much pruning as the American ones; they are more economical and profitable, but not so reliable owing to their liability to mildew. The American varieties, as a rule, are exempt from this disease. Mildew can, of course, be held greatly in check and even completely controlled by careful and thorough spraying with winter strength lime and sulphur solution in the spring as the buds are bursting, following this with one or two sprayings with summer strength of 1 to 30 of lime and sulphur solution. Gooseberries bear their fruit on spurs on the three-year-old wood. Plan to keep the bushes open and to encourage new, vigorous wood to form.

CURRENTS.

Red and black currants are usually in good demand and at good prices. Black currants are especially wanted at the jam-factories. The red currants are the most profitable and will do fairly well under more or less unfavourable conditions. Both sorts will, of course, yield greater crops of better-sized berries if well cultivated and properly pruned. Black currants bear their fruit on the two-year-old wood and red currants on the three-year-old. So it is important to prune the blacks regularly, in order to keep the older wood cut out and to encourage a good growth of new wood each year. Red currants are usually pruned to two each of one-, two-, three-, and four-year-old branches. Black currants to three each of one-, two-, and three-year-old branches.

The remarks on the different small fruits are of necessity very brief owing to the limited space of this circular, but it is hoped that the few suggestions relative to the main cultural methods and practices may be of value to those who are beginners in the small-fruit industry.

To sum up the whole, it will be seen that to ensure the greatest success in small-fruit growing, care must be given to the preparation of the soil; the characteristics of the kind and variety of fruits must be studied; and a suitable labour-supply must be procured.

Victoria, B.C., December, 1912.

VICTORIA, B.C.:

Printed by WILLIAM H. CULLIN, Printer to the King's Most Excellent Majesty.
1912.



